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ABSTRACT

A study was conducted to examine the relationship between three employee variables--perceived job satisfaction, ambiguity tolerance, and locus of control--and an employee's propensity to participate actively in the organization's communication network (network propensity). Relevant data were gathered from 108 members of an engineering firm who represented three employee levels (engineers, engineering supervisors, and department general supervisors). Data analysis indicated that employees with low job satisfaction had a greater propensity to use the informal communication network than did those with high job satisfaction. Conversely, employees with high job satisfaction had a greater propensity to use the formal communication network than did those with low job satisfaction. No relationship was found between the employee personality variables and network propensity. (A copy of the measure of network propensity is appended.) (FL)

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EMPLOYEE NETWORK PROPENSITY AS A FUNCTION OF PERCEIVED JOB SATISFACTION, AMBIGUITY TOLERANCE, AND LOCUS OF CONTROL

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ABSTRACT

Few studies have focused upon possible correlations between propensity to use communication networks in an organization and employee personality variables. The purpose of this investigation was to assess the relationship between employee job satisfaction, ambiguity tolerance, locus of control, and network propensity. Subjects were employees within a large midwestern manufacturing firm, representing three personnel levels. These employees completed job satisfaction, ambiguity tolerance, locus of control and network propensity scales. Data were submitted to smallest space analysis and analysis of variance. Employees with low job satisfaction were found to have a greater propensity to utilize the informal communication network to a greater degree than those with high job satisfaction. Conversely, employees with high job satisfaction were found to have a greater propensity to utilize the formal communication network than those with low job satisfaction. No relationship between the employee personality variables and network propensity was revealed in the study. Implications for future research are discussed.

EMPLOYEE NETWORK PROPENSITY AS A FUNCTION OF PERCEIVED JOB SATISFACTION, AMBIGUITY TOLERANCE, AND LOCUS OF CONTROL

INTRODUCTION

Internal communication may be considered one of the most important functions of any organization. Company members spend a great amount of time sending and receiving messages. To facilitate this activity, an organization systematically establishes a formal system of communication through which officially sanctioned messages are transmitted. Conversely, there exists an informal communication network which is not systematically established and, in many cases, not sanctioned. The informal communication system is situationally derived and supplements the formal system. It translates messages of the formal network, is particularly active at a time of crises when the formal messages do not get out quickly enough, and is especially prevalent in an organization that fosters secrecy. The informal and formal networks may work as supplements to one another, or may work at cross purposes.

Ambiguity Tolerance

Formal information transmitted in organizations is often untimely, fragmented, and equivocal. How a person psychologically copes with ambiguous information affects the perceptions, interpretations, and weighting of his cognitions (Norton, 1975). Thus, in a task situation, the way an employee deals with ambiguous information may, in turn, distort the outcome of his desired result. This situation is very much a reality in organizations because a person's degree of ambiguity tolerance interacts in any given situation in which there is too little, too much or seemingly contradictory information (Norton, 1975).

Ambiguity tolerance may be defined as a "...willingness to accept a state of affairs capable of alternate situations or alternate outcomes, e.g., feeling comfortable (or at least not feeling uncomfortable) when faced with a complex social issue in which opposed principles are intermingled." (English and English, 1954, p. 24) MacDonald (1970) describes a person tolerant of ambiguity as one who actively seeks, enjoys and excels in the performance of ambiguous tasks. Budner (1962, p. 29) defines ambiguity tolerance as "the tendency to perceive ambiguous situations as desirable." Therefore, it can be assumed that a person with high ambiguity tolerance will be able not only to psychologically cope with ambiguous information, but perhaps seek it out as well.

Ambiguity tolerance is a tendency to perceive or interpret information marked by vague, incomplete, fragmented, multiple, probable, unstructured,

uncertain, inconsistent, contrary, contradictory or unclear meanings as actual or potential sources of psychological discomfort or threat. Norton (1975) asserts that the more a person views a stimulus as a source of psychological discomfort or threat, the increasingly intolerant of ambiguity he may be considered. Frenkel-Brunswik (1949) suggests that a person who is reluctant to think in terms of probabilities and prefers to escape into whatever seems concrete, may be considered intolerant of ambiguity. Thus, when an employee intolerant of ambiguity is confronted with an ambiguous situation, his anxiety level will probably increase. To reduce this anxiety, he will act in such a way as to try to gain as much information as possible. This information acquisition will not only reduce the employee's anxiety, but enhance his ability to make a concrete decision as well.

Locus of Control

Another personality variable that may affect the way a person may use the communication systems in an organization is locus of control. The concept deals with the way a person copes with his environment. For example, when a person perceives a reinforcement for an action as not being contingent on that action, but rather on luck, chance or fate, or as something that was unpredictable because of the forces surrounding him, he may be considered to have a belief of external control. Conversely, if that person perceives that the event is contingent upon his own behavior or of his own relatively permanent characteristics, he may be considered to believe in internal control (Rotter, 1966). Because individuals may not perceive an event, outcome or reward similarly, differences exist in the degree to which they are likely to attribute personal control to a reward in the same situation (Rotter, 1966). Intuitively, an employee considered operating from external control would most likely be very anxious about the environment around him. In an effort to reduce his anxiety, it follows that he would tap into any messages anywhere in hopes of gaining as much information as possible about his nebulous environment.

Job Satisfaction

Job satisfaction is typically defined as an employee's affect response to various aspects of his work environment. Several theoretical approaches have been developed to describe the nature of job satisfaction including need fulfillment, discrepancy theory, equity theory, and Herzberg's Two-Factor Theory (Downs, 1977). Both unidimensional and multi-dimensional veins of job satisfaction have been incorporated in research studies, the most widely utilized conceptualization being that of Smith, Kendall, and Hulin (1969) who identified five dimensions of

the construct, these being satisfaction with supervisor, pay, work, co-workers, and promotion. One measure of job satisfaction has been developed by Taylor and Bowers (1972). Extensive results on the survey's usefulness appear elsewhere (Pecorella, Bowers, Davenport and LaPointe, 1978).

PURPOSE OF THE STUDY

The purpose of this research was to examine the relationships between three employee variables, perceived job satisfaction, ambiguity tolerance and locus of control and an individual's propensity to actively participate in the organization's communication network. The dependent variable for this investigation was network propensity. The independent variables employed in this study were employee perceived job satisfaction, ambiguity tolerance and locus of control. This investigation represents one of the few attempts in the literature at correlating employee propensity to use the organization's communication network and employee personality variables.[1]

RESEARCH QUESTIONS

On the basis of the foregoing rationale and literature review, the following three research questions were developed for this study:

Q_1: To what extent does an employee's perceived locus of control affect his propensity to utilize the communication networks in the organization.

Q_2: To what extent does an employee's perceived ambiguity tolerance affect his propensity to utilize the communication networks in the organization.

Q_3: To what extent does an employee's perceived job satisfaction affect his propensity to utilize the communication networks in the organization.

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[1]Sutton and Porter (1968) studied employee personality variables and grapevine behavior in a regional tax office. Though not significantly different, the liaisons were found to be more interaction-oriented, the dead-enders to be more task-oriented, and the isolates to be more self-oriented. Sutton (1969) found no strong or consistent relationship between employee personality variables and grapevine behavior in a state government office.

METHODOLOGY

Subjects

Subjects consisted of one hundred and eight members from an engineering division of a large midwestern manufacturing organization. They were all salaried personnel and represented three employee levels (engineers, engineering supervisors, and department general supervisors).

Instruments

Four instruments were utilized in this study: (1) The Measure of Ambiguity Tolerance (MAT-50) developed by Norton (1975), containing 61 Likert-type scale items; (2) The Locus of Control Measure, developed by Rotter (1966), containing 29 objective items; (3) An adapted version of The Survey of Organizations, developed by the Institute for Social Research (Taylor and Bowers, 1972), containing 47 Likert-type scales to assess employee perceived job satisfaction (Hain, 1972); and (4) The Network Propensity Measure, developed for the purpose of this study by the investigators (refer to the Appendix for a copy of the instrument), containing 14 Likert-type scales and two objective items.

DATA ANALYSIS

Several data analysis procedures were performed. First, because of the nature of the Network Measure, all items were converted to standardized scores. In addition, the two objective measures were deleted because of extensive missing data (items #5 and #10 shown on the instrument copy in the Appendix). Second, the measure was subjected to smallest space analysis to assess possible sub-constructs and variable groupings. Third, the individual items in variable clusters were combined into their respective grouping and totaled, resulting in two hybrid dependent variables. Fourth, two independent variables (job satisfaction and ambiguity tolerance) were stratified into two levels, high and low, and the third independent variable (locus of control) was dichotomized into internal and external categories. Fifth, the two resulting sub-construct dependent variables were subjected to three separate one-way analysis of variance tests.

Smallest Space Analysis

For structural information on the Network Measure, a nonmetric multidimensional scaling technique was used. Smallest Space Analysis (SSA) has been described by Norton (1980) as mapping a set of variables into a set of points in metric space, such that similar variables, by some empirical standard, will be close neighbors in the space and that dissimilar variables will be distant neighbors in the space.

The number of clusters and the number of items within each cluster were determined post hoc. First, the stress coefficients were examined and the solution accepted only when stress was less than .15. Second, the values for within group correlations and between group correlations were examined. Clusters were accepted only when any within group correlation was greater than any between group correlation (otherwise known as disjoint sets).

Examination of the stress coefficients revealed both the Guttman-Lingoes' coefficient of alienation and Kruskal's stress coefficient well within the designated level of .15 for both semistrong monotinicity and weak monotinicity in a single dimensional solution. (Guttman-Lingoes: .12 and .13, semi-strong and weak monotinicity, respectively; Kruskal: .09 and .08, semi-strong and weak monotinicity, respectively.)

The disjoint set criteria also fell well within their designated parameters. The within group mean correlation for both groups was: $r = .35$ and $r = .29$, respectively. The between groups mean correlation was: $r = .19$.

Another criteria used to examine these clusters was their theoretical associations. This concept suggests that SSA is used to identify and assess a priori assumptions about the data (Norton, 1980). Here, it was expected that the two sub-constructs would emerge: first, a propensity to use the formal network and second, a propensity to use the informal network. These were both identified (see Table 1).

Insert Table 1 Here

Results of the SSA and the variable intercepts are shown in Figure 2 and Table 1, respectively. Clusters seem to clearly represent the two sub-constructs mentioned above, propensity to use the formal communication network and propensity to use the informal communication network.

Insert Figure 1 Here

Insert Table 2 Here

The resulting dependent variables emerged by combining all of the Network Propensity Measure items clustering together in disjoint sets. Thus, two hybrids were used as dependent measures. The first hybrid included items: 1, 6, 11, 12, 13, 14 and was labeled "informal network usage." The second hybrid included

items: 2, 3, 4, 7, 8, 9, 16, and was labled "formal network usage."

SPSS reliability statistics were used to test the reliability of these hybrids. The informal network usage hybrid had a reliability alpha of .78; the formal network usage hybrid had a reliability of .77. Neither of these hybrids meet Nunnally's (1978) recommended alpha of .80. Nevertheless, because these alpha levels are very close, and because of the exploratory nature of this study, the analysis was continued.

Independent Variables

Three separate independent variables were measured. These included employee job satisfaction, ambiguity tolerance, and locus of control. Each variable was dichotomized into two categories. Job satisfaction scores were divided into high and low classifications by rank ordering total scores and grouping the lowest total score to the median total score as low, and the score one above the median to the highest score as high. Divisions were made in this manner so as to have an equal N per condition and ensure cell stability (N = 53, N = 54 for low and high job satisfaction, respectively). The same procedure was used to categorize tolerance for ambiguity scores (N = 54, N = 53 for low and high tolerance, respectively). Locus of control was divided into internal and external according to Rotter's (1966) previously established classification instructions (N = 78, N = 25 for internal and external locus of control, respectively). With this completed, the data could be submitted to analysis of variance.

Analysis of Variance

The two sub-contruct dependent variables (propensity to use the formal network and propensity to use the informal network) were subjected to three separate one-way analysis of variance tests. Employees with high job satisfaction were found to have significantly greater propensity to use the formal network of communication than employees with low job satisfaction ($\underline{M}$ = -24.58 versus 25.27; $\underline{p} < .01$). Additionally, employees with low job satisfaction were found to have a significantly greater propensity to use the informal communication network than employees with high job satisfaction ($\underline{M}$ = 19.93 versus -17.72; $\underline{p} < .01$). All other comparisons were not significant.

DISCUSSION

Internal communication may be considered one of the most important functions in an organization. Messages may travel through either formally designated channels or an informal system. The purpose of this study was to assess how selected personality variables and perceived job satisfaction affected an employee's propensity to use these networks.

In general, the results suggest that the personality characteristics tested, locus of control and abiguity tolerance, do not have a significant affect on an employee's network propensity. In addition, the findings suggest that: (1) employees with high job satisfaction have a significantly greater propensity use the formal communication network than do employees with low job satisfaction; and (2) employees with a low level of job satisfaction to have a significantly greater propensity to use the informal communication network than do employees with a high level of job satisfaction.

The finding that neither personality variable affected an employee's propensity to use the formal or informal communication network within an organization is a surprising one. Intuitively, it would follow that when an employee intolerant of ambiguity is confronted with an ambiguous situation, his anxiety level would increase. To reduce this anxiety, he might seek as much information as possible. Thus, a low level of ambiguity tolerance would lead an employee to supplement his formally received equivocal messages with information from the informal network.

Additionally, an employee considered operating from an external locus of control would probably be very anxious about the environment around him. In an effort to reduce this anxiety, it follows that he would try and tap into any messages in the system in hope of gaining as much information as possible about his nebulous surroundings. Thus, it seems possible that locus of control should play a role in employee propensity.

The finding that job satisfaction affects network propensity is not surprising. It seems logical that a highly satisfied employee would like his environment and be satisfied with the information he receives. In this situation, a highly satisfied worker would feel little need to rely on informal channels.

In the same respect, it seems very consistent that an unsatisfied employee would not be happy with his environment and the formal information he receives. Therefore, he might ignore or discredit communication and need to supplement such messages with information from the informal network. Moreover, he might also feel a need to find out what is "really going on" in the organization and thus depend upon the informal network to fulfill most of his information desires, or even actively seek communication outside of the formal system to reinforce his dissatisfaction with the organization.

IMPLICATIONS FOR FUTURE RESEARCH

Several suggestions for future research may be made on the basis of the

present study. First, a revision of the Network Propensity Measure should be explored. More items need to be included for instrument stability and reliability. Such items should focus on the assessment of informal network usage, amount of information obtained through the informal network, dependency on informal information, desire to communicate informally, sanctions and rewards for such usage, and so on. Additionally, the questions should be reworded in parallel form and scales should be made equivalent in format.

Second, demographics of employees should be gathered. This would enable primary and/or secondary analysis to discover how job position, tenure with the organization, sex, and age of the employee affect network propensity and intention.

Third, the Measure of Ambiguity Tolerance developed by Norton (1975) and the Locus of Control Measure developed by Rotter (1966) should be pragmatically reviewed before future inclusion. Additionally, further personality characteristics such as communicator style, self-worth and self-esteem should be considered for their possible effects on network propensity and intention.

This study has suggested that job satisfaction plays a significant role in network propensity. Further investigation in this area will lead to increased understanding of the relationships among network and employee variables.

REFERENCES

Bacon. C. C., "Communication Related Contributors of Job Satisfaction: An Analysis of Ambiguity in Job Related Messages," paper presented to the Eastern Communication Association Convention, Ocean City, Maryland, April 1980.

Budner, S., "Intolerance of Ambiguity as a Personality Variable," Journal of Personality, 1962, 30, 29-50.

Downs, C. W., "The Relationship Between Communication and Job Satisfaction," in Readings in Interpersonal and Organizational Communication, Edited by Richard C. Huseman, Cal M. Logue and Dwight L. Freshley. Boston: Holbrook Press, Inc., 1977.

English, H. B. and A. C. English, A Comprehensive Dictionary of Psychological and Psychoanalytical Terms, New York: Praeger, 1954.

Frenkel-Brunswik, E., "Intolerance of Ambiguity as an Emotional and Perceptual Personality Variable," Journal of Personality, 1949, 18, 108-143.

Hain, T., Organizational Change Patterns, Unpublished Doctoral Dissertation, The University of Akron, 1972.

MacDonald, A. P., Jr., "Revised Scale for Ambiguity Tolerance Reliability and Validity," Psychological Reports, 1970, 26, 791-798.

Mandel, J. E., "Informal Organization and Communication as They Exist Within the Formal Organization and Their Effect Upon Communication," The Administrator, Spring 1972, 10-12.

Mandel, J. E. and S. A. Hellweg, "Understanding and Influencing the Informal Communication System in the University," The Journal of the College and the University Personnel Association, 1977, 28, 51-54.

Norton, R. W., "Manifestations of Ambiguity Tolerance Through Verbal Behavior in Small Groups," Communication Monographs, 1976, 43, 35-43.

Norton, R. W., "Measurement of Ambiguity Tolerance," Journal of Personality Assessment, 1975, 39, 607-619.

Norton, R. W., "Nonmetric Multidimensional Scaling in Communiction Research: Smallest Space Analysis," in Multivariate Techniques in Human Communication Research, edited by Peter Monge, Academic Press, Inc., 1980.

Nunnally, J. C., Psychometric Theory, New York: McGraw-Hill, 1978.

Pecorella, P., Bowers D., Davenport, A., and J. LaPointe, Forecasting Performance in Organizations: An Application of Current-Value Human Resources Accounting, Ann Arbor, Michigan: Institute for Social Research, 1978.

Rotter, J. B., "Generalized Expectancies for Internal Versus External Control of Reinforcement," Psychological Monographs: General and Applied, 1966, 80, 1-28.

Smith, P., Kendall, L., and C. Hulin, The Measurement of Satisfacion in Work and Retirement, Chicago: Rand McNally and Company, 1969.

Sutton, H., "The Grapevine: A Study of Role Behavior Within an Informal Communication System," Unpublished doctoral dissertation, University of California, Berkeley, 1969.

Sutton, H. and L. W. Porter, "A Study of the Grapevine in a Government Organization," Personnel Psychology, 1968, 21, 223-230.

Taylor, J. C. and D. G. Bowers, The Survey of Organizations, Ann Arbor: Institute for Social Research, 1972.

Table 1

THEORETICAL ASSOCIATIONS BASED ON A PRIORI ASSUMPTIONS

Subconstruct	Expected Items Defining Cluster	Cluster I Items	Cluster II Items
Propensity to use the formal network	2, 3, 4, 7 8, 9, 15, 16	2, 3, 4, 7 8, 9, 15, 16	
Propensity to use the informal network	1, 6, 11 12, 13, 14		1, 6, 11 12, 13, 14

Table 2

VARIABLE INTERCEPTS

Variable	Intercept	Variable	Intercept
13	+100	15	-24.6
[illegible]	+97.9	2	-57.1
12	+92.9	7	-66.3
6	+76.6	8	-71.4
1	+70.4	3	-79.7
14	+67.4	16	-80.5
		4	-95.3
		9	-100

Figure 1: Variable Intercepts of SSA Solution

APPENDIX

NETWORK PROPENSITY MEASURE

If you suspected any important changes in your division, how valuable would you find the follwing sources of information?

	5	4	3	2	1
1. co-worker	very valuable	valuable	so-so	not very valuable	worthless
2. supervisor	very valuable	valuable	so-so	not very valuable	worthless
3. personnel office	very valuable	valuable	so-so	not very valuable	worthless
4. wait for official notice	very valuable	valuable	so-so	not very valuable	worthless
5. other (please specify)	very valuable	valuable	so-so	not very valuable	worthless

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To what extent do you rely upon the following sources to get information about what is "really going on" in your division?

	5	4	3	2	1
6. co-worker	to a great extent	to some extent	to a moderate extent	to a little extent	to a very little extent
7. supervisor	to a great extent	to some extent	to a moderate extent	to a little extent	to a very little extent
8. personnel office	to a great extent	to some extent	to a moderate extent	to a little extent	to a very little extent
9. wait for official notification	to a great extent	to some extent	to a moderate extent	to a little extent	to a very little extent
10. other (please specify)	to a great extent	to some extent	to a moderate extent	to a little extent	to a very little extent

11. What percentage of information do you obtain through "the grapevine" or "rumor mill" rather than through the official communication network?

100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%

12. What percentage of an average day do you spend in informal conversation with other employees as opposed to formal conversation with a supervisor or co-worker?

100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%

13. To what extent do you rely upon informal communication (opposed to formal communication) for your information needs?

100%	90%	80%	70%	60%	50%	40%	30%	20%	10%	0%

14. How much of the time do you believe the grapevine information is accurate?

100% of the time	90% of the time	80% of the time	70% of the time	60% of the time	50% of the time	40% of the time	30% of the time	20% of the time	10% of the time	0% of the time

15. How often is the formal communication in your organization clear and easily understood?

100% of the time	90% of the time	80% of the time	70% of the time	60% of the time	50% of the time	40% of the time	30% of the time	20% of the time	10% of the time	0% of the time

16. How effective do you believe the formal communication channels are in your organization?

5	4	3	2	1
very effective	effective	so-so	ineffective	very ineffective